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MEDICAL STATISTICS OF THE U. S. SHIP CONSTELLATION, ON
HER PRESENT VOYAGE.

[Communicated for the Boston Medical and Surgical Journal.]

As the medical statistics of our national ships, especially on voyages of circumnavigation, are somewhat of a desideratum, I hope that a concise history of the diseases affecting the crew of the United States Frigate Constellation, and the prophylactic measures adopted, may not prove uninteresting or useless.

A crew of 375 men, including officers, was received on board the Constellation, on the 26th of October, 1840, then moored off the Navy Yard, Boston:—Officers, 36; petty officers, 44; seamen, 122; ordinary seamen, 74; landsmen, 46; apprentices and boys, 24; marines, 29. When mustered, the crew presented the appearance of unusual physical energy and robust health. Such as were suspected of having feeble constitutions or special morbid predispositions, were subjected to a rigid medical scrutiny. Thirteen persons, thus surveyed, were condemned as unfit for the cruise, and transferred to the Columbus. We lay in Boston harbor through the inclement month of November, until December 9th, when we sailed for Rio de Janeiro. During the greater part of this time the weather was severely cold and stormy. In consequence of the incessant rain and sleet, the decks and apartments of the officers, the hammocks and bedding of the crew, were constantly damp, and as we did not enjoy the comfort of fires on board, the health of the officers and men was severely tried, nor did they fully recover until long after sailing. The thermometer, for many days, ranged between 20 and 30 degrees Fah.

From November 1st to December 9th, 85 cases were admitted to the sick-list, of which number 47 were cured, 13 condemned, and 25 remained under treatment at the time of sailing. More than half the cases were severe colds; the remainder were sore throats, rheumatisms and diarrhœas, caused by exposure in wet weather.

After sailing, in addition to the above causes of sickness, we experienced a gale of wind a few days out of port. Owing to some imperfection in the rudder coat, the quarters of the officers were flooded, and the ship generally rendered very uncomfortable. The battening down of the hatches caused a great difference of temperature between the apartments below and the gun and spar decks, and was a predisposing cause of sickness. We arrived at Rio de Janeiro on the 25th of January, 1841, after 46 days' passage. During the interval from the 9th of December to the 1st of February, 83 additional cases had been under

treatment, exclusive of 22 of slight injuries; 46 were colds, and 21 parotitis. The colds were very obstinate, and did not begin to abate until we crossed the line, and disappeared soon after our arrival at Rio.

We remained in the harbor of Rio 42 days, through the month of February until March 8th. The crew were daily supplied with fresh beef, and permitted the free use of the following vegetables and tropical fruits, viz.: potatoes, onions, pumpkins, oranges, paltas, figs, bananas and mangoes, all others being entirely interdicted. At this season of the year, neither the fresh provisions nor the fruits were of good quality. 77 cases were added to the sick-list; of which 42 were diarrhœas. Seven persons were condemned by medical survey and sent home. A seaman received a wound in a quarrel on shore, and died an hour afterwards from hæmorrhage, the axillary artery and vein having been divided.

Dr. Foltz, U. S. N., in his statistical account of the voyage of the Potomac around the world, says, "that ships of war remaining long in the harbor of Rio, usually have large sick-lists; diarrhœas commonly prevail; they are insidious in their approach, and frequently terminate in ulceration and a severe form of dysentery." Frequent cases of sarcocœle cannot fail to attract the notice of a stranger in almost every street of Rio. Elephantiasis and frambœsis are also very common among the slaves. The inguinal glands are extremely susceptible to indurations and enlargements difficult to resolve. Ships remaining many months on the east or west coast of South America rarely escape without numerous cases of these inguinal swellings, which, notwithstanding the most approved treatment, sedulously enforced, will suppurate, and produce obstinate indolent ulcers.

We anchored in Table Bay on the 4th of April. For a few days after sailing we had each day several cases of diarrhœa; the sick-list does not otherwise require particular notice. The Potomac had 40 cases of dysentery during the same passage in 1831. During the latter part of April we sailed 60 miles to the northward, to Saldanha Bay, where the ship remained nearly three months, undergoing such repairs as would enable her to continue the cruise. This commodious harbor is now but little resorted to, on account of the difficulty of finding a sufficient supply of water of a good quality for a large shipping. Should this defect be obviated, it will eventually become known to the commercial world. The soil about the Bay is light and sandy, with a substratum of limestone or clay. It is strongly impregnated with the salts of potass and soda, fine salt-pans being formed in some of the adjacent places, by the evaporation of pools of fresh water. The consequence is, that all the fountains of water now open on the shores of the Bay, especially those of the residency, are strongly impregnated with nitre and salt, having a slightly brackish taste, and producing the effect of a gentle diuretic and purge. This water may be used with impunity by the crews of vessels lying in Saldanha Bay, but is unsuitable for taking to sea. A tank of this water was kept on board the Boston until our arrival at Quallah Battoo, when it was served out to the crew, producing diarrhœa in one or two cases, and in a great number of instances having the full effect of a saline cathartic. After a fair trial, the use of the water of the resi-

dency was discontinued on board the ship while we were at Saldanha Bay, and supplies obtained from Cape Town.

The *aloe spicata* is seen covering the fields in the vicinity of Cape Town. The *disasma crenata*, known by the Hottentot name of buchu, is also a native of the Cape. There are several other medicinal plants greatly prized in domestic use by the Hottentots and Dutch Boors. There is one, which passes under the popular name of "*bush tea*," the infusion of which is an excellent tonic, having a taste resembling the *salvia officinalis*.

The climate fluctuates between the extremes of rain and drought. From May to August the rain falls abundantly, the prevailing winds being from the north and north-west. The mountain tops were covered with snow during some days of July, producing a singular contrast with the verdure of the plains. The soil is cultivated during this season (the winter), depending on the periodical rains, it being impossible to resort to irrigation to any extent except in the vicinity of Table Mountain. During the summer months the clayey soil is completely baked, so as to be absolutely impenetrable to instruments of tillage, but when the rains fall, the transition from sterility to exuberant vegetation is like the work of enchantment, presenting all the difference between life and death.

The mean temperature is 68 degrees. In clear weather the dews at Saldanha Bay were exceedingly heavy, but I am induced to suppose that the contrary is the case in the interior, as a residence there is highly recommended for pulmonary affections. Numerous invalids from India resort here, Cape Town being one of the prescribed places for those travelling on sick certificate, few invalids in the Company's service being allowed to resort to places farther to the westward. The climate is favorable to longevity. The bills of mortality exhibit the diseases to be met with in the corresponding northern latitudes (34 degrees), except the malignant diseases of the tropics.

Our number of admissions to the sick-list during the month of May was 85, giving an average of nearly three daily. The daily number of the sick-list shows an average of 24. During the months of June and July the number of admissions was reduced to 70—the daily list averaging 20. The hardiest sailors were unable to withstand exposure to the evening dew, suffering in almost every instance from colds and rheumatisms. During the three above-named months, there were 27 cases of diarrhoea and dysentery. Some of these, as well as many slight cases which did not come under the special cognizance of the surgeon, are to be referred to the use of the water of the residency. Furunculi were very prevalent and sometimes very severe. A case of deep-seated abscess of the posterior hypochondriac region was greatly aggravated, and eventually transferred to the lungs. Two cases of chronic bronchitis were also greatly aggravated, and two cases of phthisis pulmonalis developed, one of which was ushered in by hæmoptysis. Several times a week fresh beef and vegetables, and occasionally fruit, were supplied to the crew. The bullocks were in good condition, but from some cause the meat was not juicy. The vegetables were found to be greatly deficient in saccharine matter. Two officers returned to

the United States invalided; two of the crew were also condemned by medical survey, and sent home.

During the month of June a general order was issued to the crew to supply themselves with flannel shirts or monkey jackets fitting the body loosely, to be worn over or in lieu of the usual linen frock. A belt of the same material was directed to be worn around the loins. The Commissariat judiciously procured flannel of a substantial fabric, resembling pilot cloth, which was furnished to the crew for this purpose. This regulation was not fully carried into effect until our departure from Cape Town, on the 31st of July. The men were thenceforward directed to muster clad according to the order. This excellent plan had been previously adopted on board the Boston, with the effect of reducing the sick-list one half. The experiment has now been carried out fully for six months, reducing the sick-list from 56 admissions, the average monthly proportion of the previous nine months, to 33, or nearly one half. In making this estimate, cases of wounds, injuries and biles are excluded.

Leaving Cape Town on the 31st of July, we doubled the Cape of Good Hope, passed through Mozambique channel with light airs and a clear sky, and anchored at Johanna after a passage of 28 days. Forty cases had come under treatment during the month of August.

We remained in port 11 days, and had 23 cases of sickness, of which 11 were diarrhoeas and 9 injuries. The climate of Johanna is delightful. For the last 40 years it has been a favorite resort of ships to procure refreshments and recruit their invalids. The most obstinate cases of scurvy are said to yield, without medicinal treatment, in a surprisingly short space of time. The crew were furnished with fresh beef of excellent quality, and not restricted in the use of fruits. The ship here filled up with some of the best water I ever tasted, which is most conveniently situated for shipping. Our short stay at Johanna had a most excellent effect upon the health of the crew, and no doubt contributed in a great measure to save us from disease while prosecuting our cruise off the unhealthy coast of Sumatra.

Trade winds and currents conspired to give us a speedy and delightful passage to the coast of Sumatra in 23 days. We run for 11 days nearly on a parallel one degree south latitude. During the passage 30 cases were under medical treatment. I regret to mention that the first fatal case occurred in the death of Mr. John C. Richardson, midshipman, of fever. Many of our merchant ships, and our men of war without exception, have suffered from fevers, diarrhoea or dysentery, on the coast of Sumatra. The sick-list of the Potomac frigate, after remaining 12 days at Quallah Battoo, "from 3 had swelled to 57; 52 cases of complaints of the bowels and 12 cases of bilious fever were reported within a month." I am not able to state the precise number of the sick-list of the Columbia. I know that she suffered severely during this and the subsequent portion of her cruise. Our ship's crew were never more healthy than during the time we lay off Quallah Battoo, and our subsequent cruise along the coast, through the Straits of Malacca to Singapore. We remained at Quallah Battoo eight days, and had 7 cases of sickness. Ten additional cases of diarrhoea were admitted within four

days after sailing. The subsequent sickness of the month of October was trifling. Several of the cases of diarrhoea were under treatment 13 days, the others were discharged in a shorter period. Of the 10 persons thus affected, 5 were attached to boats. I am not aware that our escape from sickness is to be attributed to our coming upon the coast in a season especially favorable. We were at Quallah Battoo in October, the Columbia in December, and the Potomac in February. Several other circumstances are to be considered. The Constellation did not engage in any hostile attack on shore, as did the Columbia and Potomac, but the crew were equally exposed to the intense heat in watering the ship. The latter were new ships salted, which, from their attraction for moisture, are proverbially unhealthy. The Potomac and Columbia had long passages previous to visiting the Sumatra coast. We had touched at intermediate ports, and since leaving Rio had not continued at sea more than 28 days. The provisions of the Columbia, the very best which could be obtained at Bombay, were so bad as to be hardly eatable, and of course greatly deficient in nutriment. By judicious arrangements of our Commissariat, our provisions have been of the very best quality: the bread has been preserved from worms and weevil; and short passages have given frequent opportunities of recruiting the crew with fresh provisions and vegetables. The Columbia, on account of the long passage of 80 days from Rio to Muscat, was necessarily on short allowance of water. Our crew have never been put upon allowance at all. And here I cannot but recur again with pleasure to our touching at Johanna, believing, as I do, that the abundant supply of excellent water had an important influence on the health of the ship. The crew of the Constellation have not, therefore, been exposed to the usual debilitating causes, and have in consequence preserved that condition of robust health which is best capable of resisting disease in unhealthy climates.

Some points in the medical police of the ship are worthy of notice. In cleansing the deck, dry holy stones have alone been used. White-wash has hitherto been employed scantily, a departure from the usual routine, which has had, I believe, an important effect in preventing dampness in the lower part of the ship. In order to keep up the action of the surface, in addition to the use of flannel as above mentioned, strict measures have been adopted, at sea and in port, to prevent the practice of sleeping in currents of air. To guard against the deleterious effects of land breezes from marshy grounds, as well as to preserve an equable temperature, the awnings were tented at night, and the ports shut in close. The variation of temperature during the night was thus obviated. The mean of the temperature during the night on the gun-deck at Singapore, has been 82 degrees Fah.

During the year ending October, 1841, 727 cases have been admitted to the sick-list, proportioned among the different grades as follows:—Officers, 116; petty officers, 58; seamen, 221; ordinary seamen, 146; landsmen, 88; boys, 37; marines, 63. 275 persons, or about three fourths of the crew, have been sick—the proportion among the different grades being as follows:—All the officers; four fifths of the ordinary

seamen; two thirds of the seamen, petty officers and boys; three fifths of the landsmen; nine tenths of the marines.

It will be observed that the ordinary seamen and marines present a larger proportion of sick than any other class. The ordinary seamen are generally detailed for boat duty, and have been exposed more frequently to wet clothes. Some circumstances rendered the duties of the marines at one time unusually arduous. By the reduced schedule, recently adopted, but 21 privates were allowed this frigate, which has been found altogether insufficient to meet the usual demands upon the guard without taxing them beyond their physical endurance. I am informed by the marine officer, that while at Rio the attempt was made to keep up the number of posts usually deemed indispensable, and the quarter-deck parade. The consequence was, that from January 25th to February 6th, while the experiment was pending in the harbor of Rio, the number of marines upon the list was constantly increasing, varying from 2 to 6—imposing the duties of the seven posts upon the 14 (more or less), who remained well. It was found necessary, therefore, to reduce the number of posts from 7 to 4, withdrawing all sentinels from the spar deck, and dispensing with the quarter-deck parade, the officer of the deck having a standing order to apologize to visitors entitled to a guard for this omission in their reception.

The diseases affecting the crew have been as follows:—Abscess, 7; asthma, 5; anasarca, 1; bunion, 1; catarrhs and colds, 153; constipation, 21; colic, 8; caries of jaw, 1; cutaneous diseases, 10; cholera morbus, 1; dentalgia, 3; mania a potu, 1; dyspepsia, 2; diarrhoea, 115; dysentery, 13; debility, 1; epilepsy, 4; ear, ulcer of, 2; erysipelas, 2; fever, remittent, 2; do., intermittent, 12; fistula in ano, 1; furunculi, 28; fracture of leg, 1; gastric irritation, 16; heart, disease of, 1; hernia, 4; headache and neuralgia, 29; hæmorrhoids, 8; hæmoptysis, 1; inflammation of brain, 1; do. bladder, 2; do. chest, 9; do. conjunctiva, 6; do. cornea, 1; do. face, 3; do. kidney, 1; injuries and wounds, 105; lumbago, 1; neuralgia of scalp, 1; nodes, 1; otalgia, 2; parotitis, 21; pain, rheumatic, of chest and side, 30; phthisis pulmonalis, 1; rheumatism, 62; retention of urine, 3; stricture of urethra, 3; sciatica, 1; tonsillitis, 1; varicose veins, 1; venereal of all kinds, 6; ulcers, 7; whitlow, 2.

Colds, diarrhoeas and dysenteries, rheumatisms and injuries, constitute nearly two thirds of this number. As has been before remarked, the colds have been very obstinate; the diarrhoeas have generally occurred in port, many of them being a simple and salutary purging incident to a change from salt provisions to fresh beef, fruit and vegetables. There have been but two cases of acute rheumatism with fever; nor any serious injuries or wounds. One case of fever proved fatal, as did eventually a case of abscess of lungs.

Nearly three months have elapsed since the time included within the above details, during the greater part of which we have been lying in the harbor of Singapore. From the time of our arrival the sick-list continued to decrease, until but 5 were reported daily. Forty-eight hours liberty on shore was then granted the crew, in several detachments, with

the effect of swelling the sick-list to an average of 16 daily, the bulk of the diseases being attributed to intemperance and other excesses committed while on shore.

The statistics of our consort, the *Boston*, show the same exemption from sickness, and substantially the same diseases, as our own.

*U. S. Ship Constellation, Singapore
Roads, Jan. 18th, 1842.*

J. H. WRIGHT,
Ass't. Surg. U. S. Navy.

OBSERVATIONS ON INFLUENZA.

[THE following communication from a venerable and respected correspondent was received a year ago. It was mislaid at the time and forgotten—and having recently again come to light, we give it an insertion, with an expression of regret at the occurrence of such apparent neglect.]

To the Editor of the Boston Medical and Surgical Journal.

SIR,—It is now twenty-six years since my inquiry or treatise on the winter epidemic, viz., influenza, spotted fever, &c., was published; and eighteen years since my remarks on the autumnal epidemics, viz., bilious fever, dysentery, &c., were published. I have thought that some further remarks on these diseases might, at this time, be useful; more particularly as many appearances described in those publications were not at that time well understood, or but little known or attended to, viz., congestion in the veins and sinuses of the brain; deposition of lymph on its membranes, and effusion of blood and serum in different parts of this organ, &c.; spots and eruptions in the serous membrane, as well as on the skin externally; excoriation and sloughing of the mucous membrane of the mouth, stomach, lungs, &c.; consolidation or hepatization of the lungs, &c.; inflammation of the mucous membrane, and a minute sloughing of that membrane in the mouth, stomach, bowels, lungs, &c.; sinking fits; ulceration of the mucous membrane of the stomach and bowels, the ulcers occasionally affecting most of the coats of the bowels; hæmorrhage from the bowels, &c.; inflammation of the serous membrane, and of the abdominal muscles, the abdomen tense, and the bowels drawn in towards the back, &c.

Influenza has prevailed in North America in A. D. 1733, 1737, 1747, 1757, 1761, 1772, 1781, 1789, 1790, 1807, 1815, 1822, 1831, 1837, 1841. In all the above years, as far as I have been able to ascertain, the weather has been remarkably variable. (See Inquiry into the nature and treatment of Spotted Fever, page 46—60.) The two last months of 1840, and the four last of 1841, have been variable; the atmosphere has been unusually damp, the winter warm, and the spring unusually cold and backward. The number of fair days to the present time (April 30, 1841), is 91; and the number of foul days, viz., cloudy, rainy and snowy, is 90; the number of dry days, 91; the number of wet days, 54. The average number of foul days for these months, viz., cloudy, rainy and snowy, from a calculation for 11 years, is 67; the number of wet days, 48; the number of cloudy days, 19; and the number of dry

days, 114. So there is a deficiency of fair weather of 23 days, and an excess of foul weather of 23 days. The changes of temperature, though considerable, have not been so remarkable. In November there was a variation of temperature in 24 hours of 30 degrees; in December, of 29; in January, of 40; in February, of 43; in March, of 40; and in April of 35. The average variation of temperature for these months, as taken from the table above mentioned, for November, is 23; December, 23; January, 35; February, 35; March, 36; April, 34. So there is an excess in the variation of temperature, in November, of 7; in December, of 6; in January, of 5; in February, of 8; in March, of 4; and in April, of 1 degree. But what, together with the excess of wet and moisture, has greatly increased the effect of the changes of temperature, is the prevalence of the north-easterly wind—and a corresponding deficiency of the north-westerly wind. In November the wind was from the N. West 13 days, and N. East 13 days; in December, N. West 14 days, and N. East 6 days; in January, N. West 10 days, and N. East 10 days; in February, N. West 11 days, and N. East 9 days; in March, N. West 11 days, and N. East 11 days; and in April, N. West 7 days, and N. East 11 days. As will appear from the above statement, the wind was from the N. West but 66 days for six months, and from the N. East 60; while the average number of days in which the wind is from the N. West during these months is 92, and the average number in which it is from the N. East is but 19.

Dr. Henry Holland, in his medical remarks on the weather, makes many useful observations.—(See Holland's Notes on Influenza, page 118, line 16.) "It is a disease which has appeared and spread at different seasons, in the middle of summer as well as in the depth of winter, which has been found to traverse whole continents, continuing this course through many successive months, which affects contiguous places in different degrees at different times, which frequently continues in the same place for several weeks or months, under every appreciable variety of atmospheric state."

If we consider influenza to depend on atmospheric changes, such as great sudden and frequent changes of temperature, heavy rains, dense fogs, the electrical state of the air, sudden fluctuations as respects the pressure of the air, &c., hazy and damp weather, &c., why may it not prevail in summer or autumn, just as likely as in winter? The system has a power inherent to resist changes of temperature and other hurtful causes to a certain degree, which is sometimes more and at other times less; consequently a single change of temperature does not often debilitate the capillary system so far as to produce serious disease; but in general it requires a series of changes to reduce the inherent energy of the capillary system, and thereby prepare the population of a place for an epidemic. Though influenza is more uniform in its operation than most other diseases, and often spreads more rapidly, yet all inquiry into the subject shows that places in the same vicinity vary considerably in temperature; which may be occasioned by their greater or less elevation, on their having a northern or southern declivity, or being more or less exposed to a strong current of air, fog; or having a dry soil, or a

soil that is moist and steaming. The system, when reduced and enervated, does not immediately recover its tone; consequently a disease may continue under the operation of a cause less powerful than the one which produced it; yet in certain circumstances, after a long time, the system becomes acclimated, or acquires a power of resisting certain hurtful causes which it did not before possess.—(See Holland's Remarks, page 121, line 4.) "Recurring to a former period of influenza which spread over England in 1782, during April and May; had been noticed in the East Indies during 1781; had prevailed in Russia from December to February; and did not reach Italy and Spain till the autumn of 1792. It is impossible to look fairly at these circumstances and not see that the known conditions of the atmosphere, as we estimate them by our instruments, are inadequate to their explanation. Perhaps the more than common prevalence of easterly winds, with a hazy atmosphere, and dense fogs, during the season of these epidemics, are the facts most favorable to the hypothesis in question. The latter circumstance has been noticed at many different periods of their occurrence; and though correct observations are much wanting, something may be assigned to the electrical state of the air, manifestly disturbed during some of these periods of their occurrence; and possibly becoming in this disturbance the cause of the phenomena just noticed. Still these causes are too partial, and too often occurring without like concomitant effects, to justify the belief that they act as direct causes of the disease. The most summary statement of the argument, then, is this—that obvious conditions of the weather being the same in a certain number of places, the disease appears in them at very different times, or in some not at all; and, secondly, that it occurs in various places, or in different years at the same place, under states of season and weather wholly opposite to each other."

Great and long-continued changes of temperature do most usually ultimately pervade a whole continent, but not in the same degree; yet their operation is by no means equal, especially over a large extent of continent, as Europe, divided by seas, mountains, &c. Even places in the same vicinity are very unequally affected by the same change of temperature, as may be observed after our early frosts. One field of corn may at such times be killed, and another shall remain perfectly green and growing; or even in the same field a part may be killed, and a part not at all injured. Likewise we know that storms, fogs, &c., operate very unequally. Epidemics have usually spread from North to South; and that Russia and England should suffer an attack from influenza some months before Spain and Italy, is just what we should suppose, provided that the changes of temperature, &c., were the cause. Russia and England being cold and in general damp countries, abounding with swamps, fens, marshes, stagnant waters, &c., the constitution would be sooner reduced, and the capillary system sooner enervated, than in the warm, dry, and airy country of Spain. Besides, the sea and mountains of Spain must tend to ameliorate its climate. The country is of course airy, the soil dry, its climate warm. Influenza may occur in warm or cold, wet or dry weather; but a continuation of the same kind of weather is most usually healthy. Our author doubts whether

vomiting, which often happens to persons when they ascend high mountains, is to be attributed to the height to which they have ascended, the diminished pressure of the air, &c., but rather to the fatigue which they have suffered in ascending, &c. In confirmation of which he mentions a Mr. Green, who, he says, is a bold aeronaut, 'having ascended in balloons with more than 400 persons. He mentioned to me expressly,' says Dr. Holland, "that in no instance have his companions experienced vertigo or sickness; thus rendering doubtful one of the statements current on this subject, viz., vomiting, and showing how little the two great functions of circulation and respiration are affected under circumstances where such effect might be anticipated. Or if we need explanation of that singular sense of fatigue in the limbs which is alleged to occur when walking in elevated regions, even without the toil of ascent, we may perhaps find it in a suggestion of Humboldt; he conjectures that this sensation may depend on the mechanism of the joints and equipoise of the bones being disturbed by the low atmospheric pressure. The above has been confirmed by experiments made on the hip-joint, after the two bones had been detached by cutting the capsular membrane through, which show that the pressure of the air will retain the head of the thigh bone firmly in its socket, from which it sinks down when the air is artificially rarefied beneath."

So Dr. Holland infers that the vomiting, &c., to which those who ascend high mountains are subject, is not caused by any alteration in their relative situation as regards the pressure of the air, &c., but is to be attributed to the fatigue which they have undergone in ascending. But is vomiting a common occurrence as a consequence of fatigue? The ascent of high mountains and the ascent in balloons, are they parallel cases? In the ascent of a mountain, if its altitude is five miles, the atmospheric pressure will be greatly diminished—say two thirds or nearly; while the attraction of gravitation will be about the same as in any other place on the surface of the earth. In the balloon, the person, we will suppose, is distant from the surface of the earth five miles; on the mountain, he is in immediate contact with the earth. So the cases are dissimilar in one very material circumstance. In the balloon the atmospheric pressure and attraction of gravitation are in equilibrio, or very nearly so; so that there is nothing very materially to disturb the two great functions of circulation and respiration. But on the mountain, the balance between the atmospheric pressure and the attraction of gravitation is materially disturbed—the latter overpowering the former. The pressure of fluids is said to be equal in all directions; consequently, as the limb is drawn from the socket when the atmospheric pressure is greatly diminished, the attraction of gravitation remaining the same or nearly so, we infer that when the balance between these powers, viz. the attraction of gravitation and atmospheric pressure, is greatly disturbed, the blood will be powerfully attracted towards the lower extremities; consequently there will be a deficiency of blood in the brain, and congestion in the lower extremities. The pressure of the air being diminished, there will be distention of the surface of the body, and particularly of the lower extremities; hence their unwieldy, debilitated state; at

the same time there being a deficiency of blood in the brain, dizziness, vomiting, &c., will occur. As, for example, when we have long held the head down, there will be a fulness of blood in the vessels of the head; but if we rise suddenly, there will be a relative deficiency of blood in the head; of consequence we become dizzy, faint, &c., and may vomit.

How far the fluctuations of atmospheric pressure may add to the causes which have been named in the production of disease, it is at this time difficult to say; but after long observation, I have ever thought that the people who live in vallies are not affected so much by the changes of temperature as we should be inclined to believe they would be. These changes in such places are generally greater than on the hills and mountains; but not always so. May not strong atmospheric pressure on the surface of the body and in the lungs, prevent a diminution of temperature, and thereby arrest disease? and the reverse? Doubtless influenza may be considered as a species of catarrh; and who doubts that exposure to wet, cold, &c. will produce catarrh? Yet the idea of contagion, a poisoned atmosphere, &c., has greatly perplexed the study of epidemics. How much poison there may be in the air, or how much contagion, I cannot say. It is an important rule in every reasoning process, to assign no more causes for any result than are sufficient for a clear explanation; and where a variety of causes may exist, it would seem that those most apparent and consistent should be preferred.

[To be continued.]

Franklin, N. H.

JOB WILSON.

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ORGANIC CHEMISTRY AND PHYSIOLOGY.

By letters from England we understand that the new work of Professor Liebig on Organic Chemistry and Physiology, the appearance of which is looked for with great interest, had not been published so late as the 14th of May. The work has been translated by Professor Gregory, the intimate friend of the author, and under whose care it is printing in England. In a recent letter to Professor Webster, who has been requested by the author to superintend the publication in this country, Dr. Gregory expresses himself as follows:—"In my opinion, this work will mark the commencement of a new era in physiology. In translating it, I have experienced the highest admiration of the profound sagacity which has enabled Liebig to erect so very beautiful a structure on the foundation of facts, which others had allowed to remain for so long utterly useless, and of the logical structure and extreme cogency of his arguments. There is hardly a point in physiology accessible to chemistry (I mean, of course, those on which experiments have been actually made) on which he has not, by the mere force of his intellect, thrown the

brightest light. In short, we now feel that physiology has entered on the true path, and the results, before long, will, I prophesy, be altogether astonishing."

The delay in the publication has been caused by new experiments, the results of which the author is desirous of having introduced, and the necessity of cancelling several pages which the later researches of Liebig have rendered necessary. The American edition, edited by Professor Webster, will comprise all the corrections and additions, which are most important, from Professor Liebig's letters, and those of Dr. Gregory, and will appear simultaneously with the English edition.

Third Book of Natural History.—Messrs. Turner & Fisher, of Philadelphia, are publishing a series of small books on natural history, expressly prepared for the use of schools and colleges. Foreign as they are from the ordinary topics of consideration with us in this Journal, they are the production of a professional gentleman, with whom we have the pleasure of a limited acquaintance, W. S. W. Ruschenberger, M.D., a surgeon of the U. S. Navy; and no apology, therefore, is deemed necessary for speaking of the enterprise, since the labors of medical men, in any useful department of human knowledge, come fairly within the scope of our consideration.

Without intending to undervalue the third book, *on ornithology*, the last issued, we cannot view it as being equal to those which have preceded it. There is too much technology—too many hard words for the common school, at the expense of those facts illustrative of the habits and instincts of birds, which would deeply interest, instruct and enlarge the active mind of a child. On the other hand, it is vastly below what it should be for a class of collegiate students. For children it should have been more simple; and for undergraduates, more copious and elevated. Not being precisely adapted to the condition of either, it is to be feared that the book will have no permanent hold upon the public.

But it should perhaps be borne in recollection, that Dr. Ruschenberger has put into English the text of Milne Edwards and Achille Comte, from the French, and therefore it is essentially a translation, and not an original effort. Had Dr. Ruschenberger struck out a course for himself, without any regard to those authors, we apprehend that he would have very much excelled them. In no country have simple school books been more admirably devised than in the United States. This, we believe, is acknowledged in England. There is a native tact here that is exceedingly admired. In teaching the elements of science, *things* should be taught instead of *terms*. It is one of the mistakes of the age, which time and experience will ultimately correct, to make these juvenile treatises too learned for those for whom they are especially designed—learned, if long Greek and Latin names, unconnected with ideas, constitute learning.

Viewing with increased satisfaction the progress of this particular class of authors, who write for youth, we speak freely of their mistakes, not to discourage any one, but merely to intimate the importance of exerting themselves to impart ideas in the simplest systematic manner. Dr. Ruschenberger has a fine field before him, which no one can contemplate without wishing him success, equal to his scientific and literary merits.

Anatomist's Vade Mecum.—Anatomical students will be gratified to learn that a book so exceedingly valuable to them, is shortly to appear, with over one hundred and fifty illustrations, with notes by an American editor. Erasmus Wilson, the author, is without a competitor in elementary anatomy. When all Mr. Robert Druitt's unrivalled professional guides are re-published in the United States, which are loudly called for, we shall be in possession of some of the best treatises that have been published in England.

Tying the Spermatic Artery.—Dr. Winslow Lewis, of this city, tied the spermatic artery on the left side, the other day, with a hope that it might prevent nocturnal emissions in a young man who was almost driven to insanity by their frequency and copiousness. It should be remembered that the foundation of the evil for which the operation may possibly be a remedy, was laid by the habit of excessive masturbation, commenced in early life. The patient had previously attempted to secure the artery himself. At one time he thought of being emasculated; but because he entertained an idea that strength and vigor of intellect depended upon the re-absorption and diffusion of the seminal fluid in the brain, he concluded to try some other scheme to save the organs. Suffice it to say, thus far, since the ligature was placed upon the spermatic artery, there has been no return of the emissions. Dr. Lewis promises to furnish the subsequent history of the case.

It is well known, in respect to overcoming seminal debility induced by long-continued self-pollution, that physicians have always found it an extremely difficult affair to restore the patient to sound health. We had an interview with a young gentleman, within a few months, who, we ascertained to our own satisfaction, was suffering from the effects of this habit, and who had consulted a host of medical gentlemen, had taken a variety of preparations, visited springs hither and thither, and all without any benefit whatever. Those who are in his condition will doubtless watch with considerable interest the result of tying the spermatic artery.

Private Medical Instruction at Hanover, N. H.—On account of the increased number of private pupils, the Faculty of Medicine at Dartmouth College have concluded to give a systematic course of instruction. To meet the circumstances of those who may not find it convenient to remain two full years, which would be desirable, students are received for the limited period of three months. Hanover is a delightful town, in which are found all the advantages to be derived from cultivated society, and the instruction of men distinguished for their intellectual, literary and scientific attainments. A city student would enjoy a residence there of three months through the approaching heat of summer. He would certainly have books also, with daily recitations, &c., while breathing an uncontaminated atmosphere, which is something more than he is sure of in town through July and August.

Castleton Medical College.—At a meeting of the students of Castleton Medical College, held on the 3d inst., Mr. Z. W. Joslin, of New York, was called to the chair, and Mr. Alfred Rice, of New York, appointed Secretary. The object of the meeting having been stated, it was Re-

solved that the chairman appoint a committee of seven to draft such resolutions as, in their opinion, best express the sentiments of the class in relation to the present condition and future prospects of the Institution. Whereupon the following gentlemen were appointed, viz.: Messrs. H. G. Darling, of Massachusetts; D. E. Page, of Vermont; Charles Warren, of N. Hampshire; E. D. Hall, of Vermont; B. Babcock, M. D., of New York; Lucius Hannahs, of New York, and G. F. Newell, of L. Canada.

On the sixth instant the committee reported as follows:

Resolved, That in view of the recent condition of this College, a sense of gratitude, as well as of justice, impels us to give the public a statement of its present condition and future prospects. The public are already aware that the Castleton Medical College, late the Vermont Academy of Medicine, was reorganized last spring by the election of able men to fill the respective chairs. In discharge of their duty, the officers of the Institution made a general announcement of the facilities they should be enabled to afford students, in the prosecution of their studies. That announcement is before the public, and its reception may be known from the fact, that notwithstanding the adverse circumstances under which they commenced, the present class number about 70 students, many of whom have attended lectures at other schools, and all of whom honestly declare, that instead of being deceived by the announcement, their anticipations have been more than realized.

We feel authorized in saying, that the advantages for acquiring knowledge of medical science in this College, are unsurpassed by any in the country, and that from our personal acquaintance with the faculty, and the permanency given to the institution by the residence here of three of the professors, and by the purchase for the College of the extensive museum of the professor of anatomy, the public may rely upon every pledge given in the circular being faithfully redeemed.

The class being aware that the impression that a modification of Brunonianism *has been* taught here in theory and practice, is somewhat prevalent among medical men, are happy to assure them, that such is not *now* the case, as the well known pathological views of the professor in that department afford a sure guarantee. We deem it unnecessary to enumerate the numerous advantages presented by this College to the student, inasmuch as these advantages are stated in the Circular; and feeling confident that a plain unvarnished statement of facts coming from persons disinterested, cannot fail to influence those in pursuit of medical knowledge. The report was unanimously accepted, and it was

Resolved, That the faculty be requested to publish this statement in their annual circular, and make such other disposition of it as they may deem proper.

Medical Appointments in the Navy.—The following-named gentlemen have been examined and found qualified to discharge the duties of Assistant Surgeons in the Navy, and classed according to their relative merits, as follows:—No. 1. William S. Bishop, of Pennsylvania. 2. Samuel M. Edgar, of Tennessee. 3. Joseph Wilson, jr., of Pennsylvania. 4. Charles Eversfield, of Maryland. 5. Elisha K. Kane, of Pennsylvania. 6. Edward Hudson, of Pennsylvania. 7. Richard McSherry, of Maryland. 8. William Pitt Canning, of Massachusetts. 9. Ephraim J. Bee, of New Jersey. 10. Joseph L. Burt, of Ohio. 11. John T. Bartow, of Georgia. 12. Alfred C. Holt, of Georgia. 13. James Hamilton, of Maryland. 14. Charles Henry Oakley, of New York. 15. Reuben N. Baer, of Pennsylvania.

Medical Miscellany.—In Kentucky, there are thirteen Revolutionary pensioners between the ages of 100 and 109!—Thomson's New Guide to Health—a new work on the lobelia system—costs \$12 per copy! The friends of the practice pay well for all they get out of Thomsonian writings.—Dr. David P. Holton is lecturing in New York on physiology and natural theology.—Mr. Phelps's truss meets with good success, many medical gentlemen in New York giving a preference to it.—A circular of the New Hampshire Medical Institution at Dartmouth College, for the present year, is published. This has been a highly respectable school of medicine from the commencement, under the late celebrated Dr. Smith.—A large number and variety of surgical instruments, of German manufacture, it is presumed, were offered at auction in Boston last week. The sale was not very brisk. This was rather a novel sort of sale.—Small-pox and varioloid are still existing and causing considerable alarm at New Orleans.—Two medical students are represented to have been connected with the disgraceful riot at Bowdoin College, a while since.—Dr. Alexander Jones has brought to this country, from Europe, a curious machine for engraving, called an *omnigraph*, which is said to accomplish, in a given time, the work of ten hands.

MARRIED.—In Boston, Dr. C. C. Holmes, of Milton, to Miss Elizabeth Mary Rich, daughter of Benjamin Rich, Esq.—In New York, on the 2d inst., at the Astor House, J. Leland Miller, M.D., to Miss Mary Sigourney Towne, both of Providence, R. I.—At Southwick, Mass., Oliver W. Kellogg, M.D., to Miss. E. S. Fletcher.

DIED.—At Milton, Dr. Amos Holbrook, in the 89th year of his age.—At Amherst, Mass. Dr. O. Potter, 82.

Number of deaths in Boston for the week ending June 18, 36.—Males, 20; Females, 16. Stillborn, 3. Of consumption, 4—typhus fever, 1—rheumatic fever, 1—erysipelas, 1—inflammation of the larynx, 1—infantile, 1—scarlet fever, 7—insane, 1—lung fever, 2—croup, 2—inflammation of the lungs, 1—dropsy on the brain, 1—disease of the heart, 1—dropsy, 1—child-bed, 1—worm fever, 1—dropsy on the chest, 1—disease of the brain, 1—measles, 2—old age, 1—hooping cough, 1.

BERKSHIRE MEDICAL INSTITUTION—AT PITTSFIELD, MASS.

The next annual course of Lectures will commence on the first Thursday (5th) of August, 1842, and continue thirteen weeks.

HENRY H. CHILDS, M.D., Professor of the Theory and Practice of Medicine and Obstetrics.

ALONZO CLARK, M.D., Professor of General and Special Pathology.

MORIS A. LEE, M.D., Professor of Materia Medica and Pharmacy.

FRANK H. HAMILTON, M.D., Professor of the Principles and Practice of Surgery.

BENJAMIN R. PALMER, M.D., Professor of Anatomy and Physiology.

CHESTER DEWEY, M.D., Professor of Chemistry, Botany and Natural Philosophy.

HON. JACOB COLLAMER, A.M., Medical Jurisprudence.

JAY C. BUTLER, M.D. Demonstrator of Anatomy.

FEES.—For the whole course of Lectures, \$50. Students who have attended two full courses of lectures at any incorporated school of medicine, will be required to pay \$10. Graduation fee, \$18. Board, from \$1.50 to \$2.00 per week.

Students who propose attending the course of Lectures will find it advantageous to spend a few weeks in the Reading Term, to which they will be admitted gratuitously. H. H. CHILDS, President.
Pittsfield, May, 1842. Je 22—1A

NEW HAMPSHIRE MED. INSTITUTION OF DARTMOUTH COLLEGE.

The annual course of Medical Lectures in this Institution will commence on Thursday, the 4th of August, 1842, and continue three months. There will be four lectures daily, with examinations. All surgical operations before the class are performed *gratis*. Fees for the course, \$50, payable at the commencement of the lectures. Matriculation, \$3.00. Graduating expenses, \$18. Every facility for private dissections.

Surgery, Obstetrics, and Diseases of Women and Children, by
Materia Medica, Medical Jurisprudence and Medical Botany, by
Chemistry and Pharmacy, by
Theory and Practice of Physic, and Pathological Anatomy, by
Anatomy and Physiology, by

DIXIE CROSBY, M.D.
EDWARD E. PHELPS, M.D.
OLIVER P. HUBBARD, M.D.
JOSEPH ROBY, M.D.
EDMUND R. FEARLESS, M.D.

Private instruction given by the Resident Professors throughout the year.

Je 22—

OLIVER P. HUBBARD, Secretary of the Faculty.

MEDICAL INSTRUCTION.

THE subscribers at their room, 5 1-2 Tremont Row, continue to give instruction in all the branches of a thorough medical education, in connection with attendance on the Massachusetts General Hospital and the Infirmary for Diseases of the Lungs, the practical study of anatomy, &c.

Ap. 6—

H. I. BOWDITCH,
H. G. WILEY,
G. C. SHATTUCK, JR.
S. PARKMAN.

UTERO-ABDOMINAL SUPPORTER.

THE subscriber having moved from No. 16 Howard street to No. 3 Winter street, would inform medical gentlemen that he still continues to manufacture his improved "CHAPIN'S Abdominal Supporters, and they can be furnished with this instrument (which has been found so useful in cases of prolapsus uteri, abdominal and dorsal weaknesses, as well as in cases of prolapsus ani), from \$2.50 to \$7.00, according to the finish. Perineum straps (extra) at 75 cts. to \$1.00. The measure of the patients to be taken around the pelvis in inches.

Reference may be had to the following physicians in Boston, among others, who recommend this instrument:—Dr. John C. Warren, J. Randall, W. Channing, Geo. Hayward, J. Ware, E. Reynolds, Jr., J. Jeffries, G. B. Doane, J. V. C. Smith, W. Lewis, Jr., J. Homans, J. Mason Warren, &c.

The supporter, with printed instructions for applying the same, will be furnished and exchanged until suitably fitted, by application personally, or by letter, to A. F. BARTLETT,

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Chelsea, September, 1841.

Sep. 8—eoptf.

GEORGE W. OTIS, JR.

INSTRUMENTS.

THEODORE METCALF, Apothecary, No. 33 Tremont Row, offers to surgeons and dentists, the best selected assortment of Instruments to be found in the city: consisting in part of Amputating, Trepanning, Obstetrical, Dissecting, Strabismus, Pocket, Eye and Cooper's Cases; Scarificators, Catheters, Bougies, Stomach Pumps, Injecting do., Spring and Thumb Lancets, Dissecting and Dressing Scissors, Trocars, Needles, Bistouries; Dressing, Polypus and Throat Forceps, Tonsil Instruments, &c. &c. of American and English manufacture.

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THE undersigned hereby gives notice, that he is furnished with the various instruments invented by Heber Chase, M.D., of Philadelphia, for the radical cure of Hernia; and will continue to attend personally to their application, as he has heretofore done during the absence of the late Dr. E. W. Leach, of this city.

HENRY G. CLARK, M.D.,

May 19, 1842.

My 25—

No. 204 Hanover street, Boston.

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My 11—

D. SMILEY, JR.

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